

REMARKS

Claims 14-16 and 18-24 are pending.

Claims 14-16 and 18-22 stand rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dever et al. (US 6,262,310). Applicants respectfully traverse this rejection. The Examiner argues that Dever et al. anticipates the instantly claimed invention when  $R_{5-6}$  is hydroxy alkyl (or where  $R_{5-6}$  is an alkyl group substituted with an alkyl hydroxy group). Applicants note, however, that the compounds described in Dever et al., columns 2-4, contain a hydroxyl group separate from the amine group which would correspond more closely to  $R_{1-4}$  than to  $R_{5-6}$  of compound (I) of present claim 14. Furthermore, in Dever et al., "the hydroxyl group and the amine group are always attached to adjacent, i.e. an adjoining or contiguous carbon atom" (Dever et al. column 3, lines 63-63). Instant claim 14 does not list a hydroxyl group as a possibility for  $R_{1-4}$ . Indeed, the present compounds are prepared by a process in which an amino alcohol is hydrogenated in the presence of a catalyst which has dehydrating and hydrogenating properties (specification page 4, lines 31-34), which would remove such a hydroxyl group. Additionally, applicants enclose a Declaration of Dr. Marco Bergemann evidencing the unexpected advantages of compounds lacking a hydroxyl group in said position. Therefore, it is urged that this rejection has been overcome and should be withdrawn.

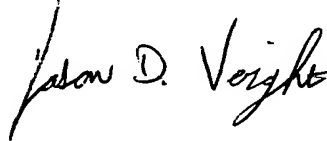
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MELDER et al., Serial No. 09/666,303

any excess fees to such deposit account.

Respectfully submitted,

KEIL & WEINKAUF

A handwritten signature in black ink that reads "Jason D. Voight". The signature is written in a cursive style with a large, stylized 'J' and 'V'.

Jason D. Voight  
Reg. No. 42,205

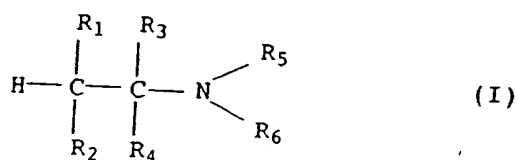
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**MARKED-UP VERSION SHOWING CHANGES MADE**

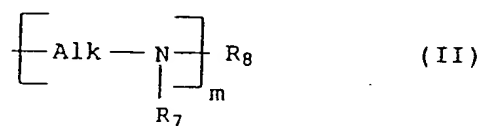
Amend claims 14 and 20, and add new claims 23 and 24, as follows:

14. (currently amended) A polyalkene amine which is substantially free of halides and has the formula (I)



where

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub>, independently of one another, are each hydrogen or an unsubstituted or substituted, saturated or mono- or polyunsaturated aliphatic radical having a number-average molecular weight of up to 40000, at least one of the radicals R<sub>1</sub> to R<sub>4</sub> having a number average molecular weight of from 150 to 40000, and R<sub>5</sub> and R<sub>6</sub>, independently of one another, are each hydrogen, alkyl, cycloalkyl, hydroxyalkyl, aminoalkyl, alkenyl, alkynyl, aryl, arylalkyl, alkylaryl, hetaryl or an alkyleneimine radical of the formula (II)



where

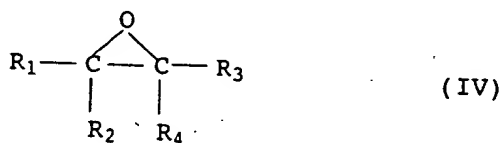
Alk is a straight-chain or branched alkylene,

m is an integer from 0 to 10, and

R<sub>7</sub> and R<sub>8</sub>, independently of one another, are each hydrogen, alkyl, cycloalkyl, hydroxyalkyl, aminoalkyl, alkenyl, alkynyl, aryl, arylalkyl, alkylaryl or hetaryl or, together with the nitrogen atom to which they are bonded, form a heterocyclic structure,

or R<sub>5</sub> and R<sub>6</sub>, together with the nitrogen atom to which they are bonded, form a heterocyclic structure, it being possible for each of the radicals R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> to be substituted by further alkyl radicals carrying hydroxyl or amino groups.

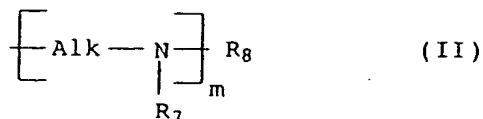
20. (currently amended) A polyalkylene amine as defined in claim 19, which is derived from a polyalkene epoxide of the general formula (IV),



the polyalkene portion of which is formed of 1-butene or isobutene monomers and the amine portion of which is derived from ammonia.

23. (new) A polyalkene amine as defined in claim 14, where

R<sub>5</sub> and R<sub>6</sub>, independently of one another, are each hydrogen, alkyl, cycloalkyl, aminoalkyl, alkenyl, alkynyl, aryl, arylalkyl, alkylaryl, hetaryl or an alkyleneimine radical of the formula (II)



where

Alk is a straight-chain or branched alkylene,

m is an integer from 0 to 10, and

R<sub>7</sub> and R<sub>8</sub>, independently of one another, are each hydrogen, alkyl, cycloalkyl, hydroxyalkyl, aminoalkyl, alkenyl, alkynyl, aryl, arylalkyl, alkylaryl or hetaryl or, together with the nitrogen atom to which they are bonded, form a heterocyclic structure,

or R<sub>5</sub> and R<sub>6</sub>, together with the nitrogen atom to which they are bonded, form a heterocyclic structure, it being possible for each of the radicals R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> to be substituted by further alkyl radicals carrying amino groups.

24. (new) A polyalkene amine as defined in claim 14, where there is no hydroxyl group attached to a carbon atom which is adjacent to a carbon atom to which the -NR<sub>5</sub>R<sub>6</sub> group is attached.